

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding  
Policies, Procedures and Rules for  
Development of Distribution Resources  
Plans Pursuant to Public Utilities Code  
Section 769.

Rulemaking 14-08-013  
(Filed August 14, 2014)

**COMMENTS OF NRG ENERGY, INC.**

**ON**

**DRAFT GUIDANCE TO UTILITIES**

**RE: DISTRIBUTION RESOURCE PLANS**

Abraham Silverman  
Brian Theaker  
NRG Energy, Inc.  
211 Carnegie Center  
Princeton, NJ 08540  
(609) 524-4696  
Abraham.Silverman@nrg.com

Dated: December 12, 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding  
Policies, Procedures and Rules for  
Development of Distribution Resources  
Plans Pursuant to Public Utilities Code  
Section 769.

Rulemaking 14-08-013  
(Filed August 14, 2014)

NRG Energy, Inc. (“NRG”) hereby submits the following comments to Assigned Commissioner Michael Picker’s *Ruling re Draft Guidance for Use in Utility AB 327 (2013) Section 769 Distribution Resource Plans*, (“Draft Guidance”)<sup>1</sup> currently pending before the California Public Utilities Commission (“CPUC” or “Commission”). NRG appreciates the thoughtful guidance provided by Commissioner Picker, and provides these additional comments on the Draft Guidance.

The Draft Guidance sets these broad goals for the Distribution Resource Plans (“DRPs”):

1. To modernize the electric distribution system to accommodate two-way flows of energy and energy services throughout the IOUs’ networks;
2. To enable customer choice of new technologies and services that reduce emissions and improve reliability in a cost efficient manner; and
3. To animate opportunities for DERs [Distribution Energy Resources] to realize benefits through the provision of grid services.<sup>2</sup>

NRG strongly supports these well-crafted goals. Given the Draft Guidance’s emphasis on transparency, NRG would propose to modify these goals only through the addition of a single

---

<sup>1</sup> References to the “Draft Guidance” document in these comments are to page numbers in the Attachment, which is titled “Draft Guidance for R.14-08-013”.

<sup>2</sup> Draft Guidance at 4.

word: to change goal 2 to read “[t]o *transparently* enable customer choice of new technologies and services that reduce emissions and improve reliability in a cost efficient manner.” NRG commends the Draft Guidance’s efforts to bring the level of transparency to the distribution resource plans (“DRPs”) necessary to foster effective deployment of Distributed Energy Resources (“DERs”).

## **1. GENERAL COMMENTS ON DRAFT GUIDANCE**

NRG agrees with the direction set forth by Commissioner Picker in the Draft Guidance. In these comments, we highlight the following key areas with suggested minor modifications, if necessary:

*Successful Integration of DERs Requires a Move Towards an Open Platform Networked Distribution System:* Page 8 of the Draft Guidance highlights the long-term changes that are needed to make the distribution system more friendly for two-way energy transactions. We agree that an open platform of networked distribution facilities is critical to the type of distributed energy future envisioned in the More Than Smart proceeding. In particular, an “open” system will be critical to fostering competitive DER investment.

*Distribution Planning Should Include Gas, Water and other Services:* The Draft Guidance also recommends that utilities should converge planning for natural gas, water, and other services with their planning of the distribution system. NRG supports this more comprehensive view. Innovation and customer-facing competition are increasingly going to drive the more efficient use of energy intensive and scarce resources, and we believe there are significant synergies that can be achieved through such competition, both at the consumer level and in terms of assuring greater long term efficiency of utility infrastructure.

*Allowing DERs to Substitute for Transmission & Distribution Investment:* As Commissioner Picker notes, setting up a system that allows for head-to-head competition between DERs and T&D investment is a “daunting challenge.”<sup>3</sup> However difficult, we agree that this is a task that the industry needs to address “head on” because of the potential savings that these distributed investments could create for ratepayers. As the Draft Guidance notes, “deferral or avoidance of network upgrades may, in fact, offset much of the expected costs of accommodating new customer-side resources.”<sup>4</sup> NRG agrees with the Draft Guidance that a shared-savings approach would have the benefits of reducing ratepayer T&D costs, financing private DER investment, and increasing the reliability and resiliency of utility operations.

*Interconnection Service:* As the Draft Guidance notes, all DER projects start with the interconnection process. NRG agrees with Commissioner Picker that standardization and simplicity are both key to opening up the distributed energy future.<sup>5</sup> For example, PG&E already processes most rooftop solar interconnection requests in less than a week. There is no reason why a week’s turnaround – or less - for straightforward and replicable interconnection requests should not become the standard for all of California (and an example for the rest of the country). NRG supports additional reforms to the interconnection process to accomplish this.

*Utilities Must Remain Neutral in their Role as Distribution System Operator (“DSO”):* NRG strongly agrees with the Draft Guidance’s emphasis on the need for the DSO to offer open access for competitors to sell their products on the distribution system. Importantly, our view is that much of the value to customers and to the electric system as a whole will come from competitive services facilitated by specific technologies and products. For this reason, NRG

---

<sup>3</sup> Draft Guidance at 5.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

recommends that the final Guidance document makes explicit provisions that will allow competitors to aggregate and sell services, such as voltage support or ancillary services, to both the utility *and* to the CAISO, and, conceivably, to third parties, such as the operator of or purchasers in the “Distribution System Market” contemplated in the Draft Guidance.<sup>6</sup>

Allowing access to all potential markets helps speed deployment of DERs by allowing suppliers to take their products to the most attractive markets and to realize cost and customer value synergies in the process.

## **2. SPECIFIC RESPONSES TO RECOMMENDED DISTRIBUTION RESOURCE PLAN CONTENT:**

NRG supports many of the specific recommendations proposed by Commissioner Picker and provides the following comments on specific elements.

### **A. Integration Capacity Analysis**

Providing a circuit-level analysis of the distribution system and making that analysis publically available to all parties is beneficial to companies, like NRG, that are interested in deploying DER technologies. NRG spends considerable time and effort evaluating various customer sites to determine which are most suitable for DER deployment. As the Commission has recognized, interconnection timelines and costs can be a major driver of DER economics. Making available the physical limits of various circuits on the California distribution system would be beneficial to competitive suppliers, by allowing competitive DER providers to focus on the most value-enhancing DER investment.

NRG agrees with Commissioner Picker that, as a first step, California’s utilities should evaluate the “base case” ability of the distribution system to handle new DER investment, and then overlay the impacts of various CPUC initiatives. NRG agrees that these resource maps

---

<sup>6</sup> Draft Guidance at 26.

should identify the DER hosting capability that is available today, as well as the projected hosting capability two- to three-years in the future. As Commissioner Picker notes, it will be critical to ensure that the forward projections articulate exactly what load growth and DER deployment assumptions underlie those projections. Additionally, NRG recommends that each DRP not only “identify circuits that exhibit high levels of penetration,” as specified by the Draft Guidance,<sup>7</sup> but also identify whether those circuits are sufficient to meet the high levels of penetration, and if not, identify a plan for upgrading those limiting elements.

### **B. Optimal Location Benefits Analysis**

The Draft Guidance requires that utilities identify and update the “net benefit” that DERs can provide in specific, circuit-by-circuit locations.<sup>8</sup> There is no question that this information would be beneficial to third parties like NRG and provide them with the necessary transparency into distribution system operations that would enhance the effective deployment of competitive and innovative DERs. In addition, a public process around the development of these analyses will help ensure that the utilities do not overlook particular customer, economic or other benefits that DERs can offer. However, NRG is concerned that such an approach could be used to “redline” or otherwise limit DER deployment in locations where DERs do not provide net utility distribution system benefits. The locational benefit analyses should be used to particularly promote the location of DERs where they can reduce or offset distribution utility costs; they

---

<sup>7</sup> Draft Guidance at 16.

<sup>8</sup> The Draft Guidance, at page 15, directs the utilities to identify the amount of available capacity “down to the circuit level”. At page 16, the Draft Guidance directs the utilities to (1) “[s]pecify a process for regularly updating the Integration Capacity Analysis”, (2) “specify the net benefit in a given location that DERs can provide”, and, further “develop...[a] unified locational benefits methodology consistent across all three Utilities.” Taken together, NRG interprets the Draft Guidance as proposing to specify and update the net benefits of adding DER on a circuit-by-circuit basis.

should not be used to limit or reduce the ability of customers in other locations to realize their own benefits by deploying DERs.

NRG strongly supports the inclusion of all of the elements below as stated in the Draft Guidance for inclusion in the DRPs:

1. Avoided capital costs for distribution upgrades;
2. Avoided O&M;
3. Avoided electricity purchases – quantified in terms of both retail rates and nodal wholesale prices;
4. Avoided Resource Adequacy (RA) purchases -- to include system, local, and flexible RA (where applicable);
5. Avoided energy losses for distribution system and transmission;
6. Improved distribution system reliability and resiliency. Within this criteria, the Utilities shall identify specified reliability and resiliency metrics that DERs can improve (e.g., distributed storage reducing SAIFI and SAIDI);
7. Additional safety related criteria;
8. Definition of each of the benefit and cost criteria included in the locational benefits analysis; and
9. Description of how a locational benefits methodology can be integrated into distribution infrastructure planning and investment decisions, as well as long-term planning initiatives like the ISO's TPP, the Commission's LTTP, and CEC's IPER.<sup>9</sup>

Should a utility be unable to complete the required analysis before the July 1, 2015 due date, NRG recommends that the Commission require each utility to provide its analyses on a rolling basis, with a subset of all circuits included in the initial rollout, followed by more circuit analyses in the following months. A slower rollout would be preferable to restricting or reducing the level of detail proposed in the Draft Guidance.

### **C. DER Growth Scenarios**

The Draft Guidance includes a requirement that the utilities conduct three ten-year forward scenario analyses, corresponding to the IEPR "Trajectory" Case ("Scenario 1"), the IEPR "High Growth" Case ("Scenario 2"), and a third even higher growth case that incorporates

---

<sup>9</sup> Draft Guidance at 16-17.

assumptions from the Zero Net Energy Targets and the Governor’s Zero Emission Vehicle Action Plan (“Scenario 3”).<sup>10</sup> NRG concurs that these three scenarios should serve as the basis for the DRP scenario analyses.

#### **D. Demonstration and Deployment**

The Draft Guidance correctly notes that “it is critical that the Utilities develop proof points that demonstrate the capabilities of DERs to meet grid planning and operational requirements.”<sup>11</sup> In order to accomplish this goal, the Draft Guidance requires utilities to perform a variety of studies geared at better understanding the benefits of DER deployment in a series of scenarios, or “Locational Benefits Analysis,” or “LBA Studies”. Specifically, each Utility is required to complete detailed scenario analysis for the following:

- a) Examine the transmission system benefits of DER deployments in a given Distribution Planning Area;
- b) A demonstration project that examines the benefits of DER deployment to three DER use-cases (which could, for example, include benefits to Resource Adequacy, Distribution Capacity Deferral, or Voltage/Reactive Power reductions);
- c) A demonstration project under high DER penetration levels that examines the impact of multiple DER deployments on distribution system operations; and
- d) A demonstration project that identifies the impact of DER deployments on distribution marginal pricing for a specific distribution planning area.

In each case, the Draft Guidance states that the demonstration projects must be achievable within 12 months after approval by the CPUC. NRG supports Commissioner Picker’s goal of validating the benefits of DER investment. NRG recommends that the Commission require that the utilities include feedback from third-parties in the production of the DRPs, and in particular, about the various demonstration projects evaluated under this prong of the Draft Guidance.

---

<sup>10</sup> Draft Guidance at 17.

<sup>11</sup> *Id.*



## **E. Data Access**

The Draft Guidance correctly notes that access to data about the distribution system is critically important to the successful and cost-effective deployment of DERs. NRG strongly supports the proposal in the Draft Guidance to document to require each utility to develop clear guidelines on how it will share its data on a real-time (or near real-time) basis, as possible.

Included in the list of data that NRG holds must be shared are:

- Distribution system characteristics, at the substation and feeder levels;
- Coincident and non-coincident peak demands, capacity levels, outage data and projected investment needs
- Smart meter data, including interval billing data;
- Demographic information, including income levels, CARE customer, and DG adoption projections;
- Distribution load planning forecasts; and
- Technical power quality data, such as voltage, frequency, reactive power and power factor.

The Commission must not lose sight of the critical importance that providing access to information will play in facilitating third-party DER investment. Developing a platform that will allow utility customers to voluntarily provide developers with timely, streamlined access to the customer's own information will be an essential step in moving towards the desired more distributed future. While respecting customer privacy is of paramount concern, categorically limiting access to the customer's information will almost certainly prove to be a hurdle that, more than any other physical, economic or environmental hurdle, will frustrate the transformation that the DRPs are intended to catalyze for the widest possible range of products from both the utilities and third parties. Information that is not customer-specific (such as feeder operating information) should be provided as widely as possible, subject only to the necessary restrictions. Further, customers should be permitted to "opt-in" to provide their customer-specific information to third parties in an easy and accessible way.

Moreover, access to information is important to the development of systems that can, in the open platform environment envisioned by Commissioner Picker, facilitate the provision of DER-focused aggregated distribution reliability services. Facilitating greater access to all information will help unleash the third-party innovation that will transform the ways customers use the distribution system and the ways they can help ensure its reliability.

NRG also notes that the Draft Guidance includes the caveat that if there is some data that “is deemed to be confidential [the utility must provide] an explanation of why data cannot be shared and a proposed alternative to sharing data that still supports goals of DRPs.”<sup>12</sup> NRG recommends that the Commission set forth a strong presumption that all non-customer-specific data should be shared, subject to appropriate safeguards. NRG further recommends that “opt-in” systems facilitating the sharing of customer-specific information be developed.

#### **F. Tariffs and Contracts**

Finally, the Draft Guidance requires that utilities address the following with respect to the demonstration projects ordered in connection with the “Demonstration and Deployment” section discussed above: “propose or identify standard tariffs, contracts or other mechanisms for the deployment of cost-effective distributed resources that satisfy distribution planning objectives.”<sup>13</sup>

In particular, utilities are directed to:

1. Outline existing tariffs that govern DER deployment;
2. Propose recommendations for how to instill a locational component in those existing programs;
3. Develop recommendations for new services that could be implemented as part of the demonstration projects; and
4. Propose interconnection reforms.

---

<sup>12</sup> Draft Guidance at 21.

<sup>13</sup> *Id.*

This appears to be an extremely helpful component of the DRPs. Standard tariffs or contracts could be a very effective way to spur the third-party investment in the deployment of DERs that will facilitate competition. NRG agrees that, for the purposes of the DRPs, discussion of new or modified tariffs should be limited to demonstration projects. This will allow for new tariffs and rate structures to be “road tested” prior to putting them into general use. In particular, seeking utility feedback on how to improve the locational aspects of existing programs would be very useful.

The Draft Guidance indicates that “[f]or the purposes of these DRPs, discussion of new or modified tariffs and contracts should be limited to their applicability in demonstration projects.”<sup>14</sup> In developing new or modified tariffs based on demonstration projects the utilities need to set forth the pathway for contracts or tariffs that prove their worth to be expanded.

#### **G. Definitions**

The Draft Guidance proposes definitions for key terms to be used in the DRPs. NRG strongly supports the proposed definition of “Optimal Locations”. This definition recognizes that an “optimum” location for a DER can extend beyond obviating or deferring the need for additional distribution system infrastructure, and can include concepts such as enhancing customer resiliency, minimizing interconnection cost, or providing “economic, environmental or social equity at a specific location”.<sup>15</sup> As the proposed definition captures, without mandating a particular objective function, many factors can lead to an individual DER deployment as being “optimum”, especially when the needs or desires of an individual customer are taken into account. While it may be tempting to try to create a more precise engineering or economic

---

<sup>14</sup> *Id.*

<sup>15</sup> Draft Guidance at 28.

definition of “optimum location”, leaving room for individual customer preference within this definition is sound policy.

### **3. CONCLUSION**

Commissioner Picker’s recommended Draft Guidance presents the logical next step in bringing transparency to the distribution system operations. The Draft Guidance, if fully implemented by the utilities, would create DRPs that will begin to unlock customer value and facilitate customer choice for innovative energy products and services. NRG appreciates this opportunity to comment and looks forward to participating further in this important proceeding.

Respectfully submitted,

/s/ Abraham Silverman

Abraham Silverman

Brian Theaker

NRG Energy, Inc.

211 Carnegie Center

Princeton, NJ 08540

(609) 524-4696

Abraham.Silverman@nrg.com

December 12, 2014